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1: Pain 2000 Feb;84(2-3):133-9

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Computer-assisted infrared thermographic study of axon reflex induced by intradermal melittin.

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The aim of the present study was to investigate whether melittin, the principal toxin of the honeybee (*Apis mellifera*) venom, can be used as an algogenic agent in the study of pain in humans. Five micrograms of melittin in 0.5 ml of saline was intradermally injected into the volar aspect of the forearm. Resultant pain was scored by a visual analogue scale (VAS), and skin temperature change was analyzed by means of a computer-assisted infrared thermography. Intradermal melittin temporarily produced severe pain, followed by a sustained increase in skin temperature. The skin temperature increase peaked in about 10 min and outlasted 1 h. Topical application of 10% lidocaine gel did not significantly suppress the melittin-induced pain, but markedly suppressed both the increase in the peak temperature and the area of temperature increase. In conclusion, 5 microg of melittin is sufficient to produce pain in humans and 10% lidocaine gel differentially decreases the melittin-induced axon reflex without any significant analgesic effect.

Publication Types:

- Clinical Trial

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